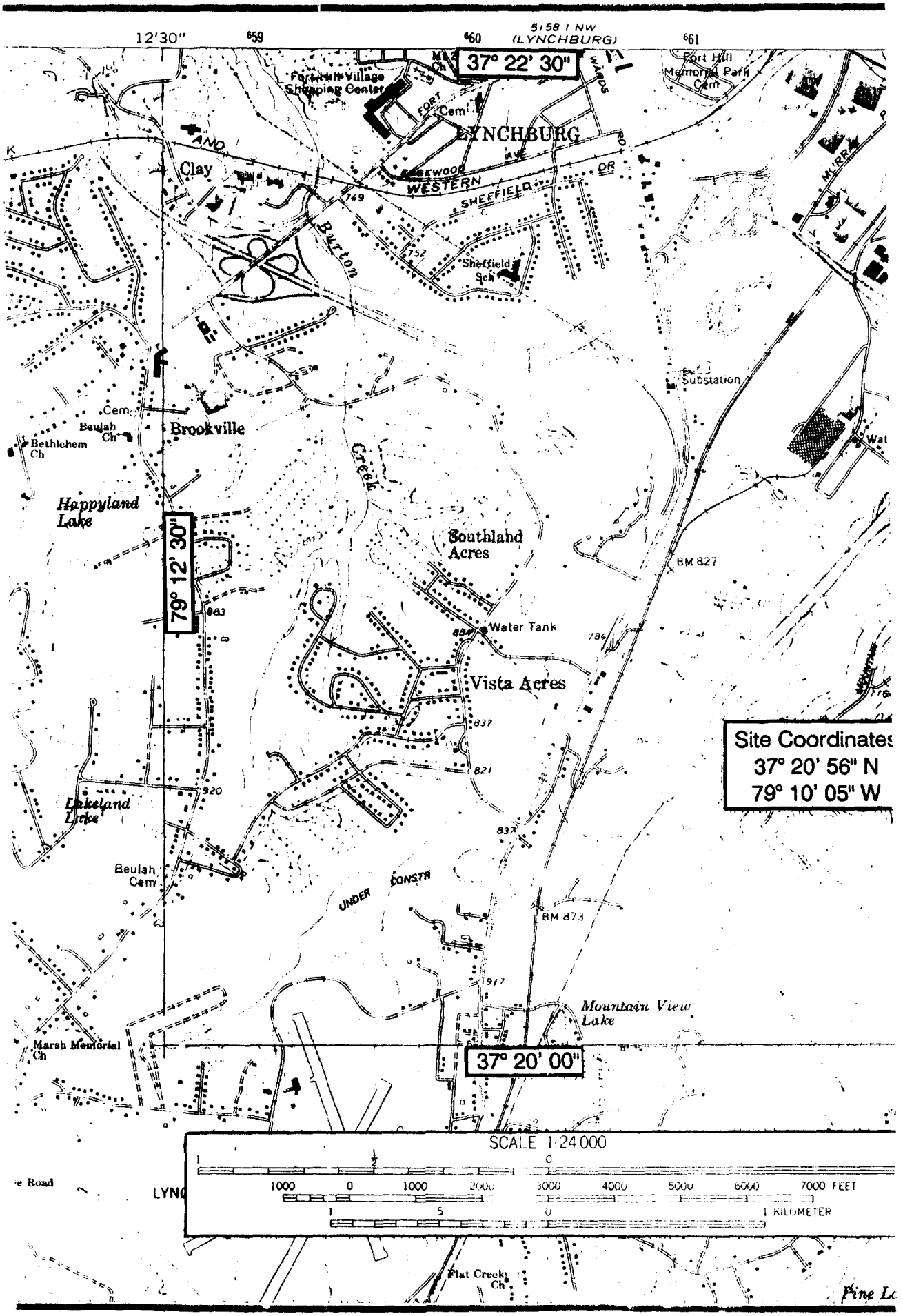
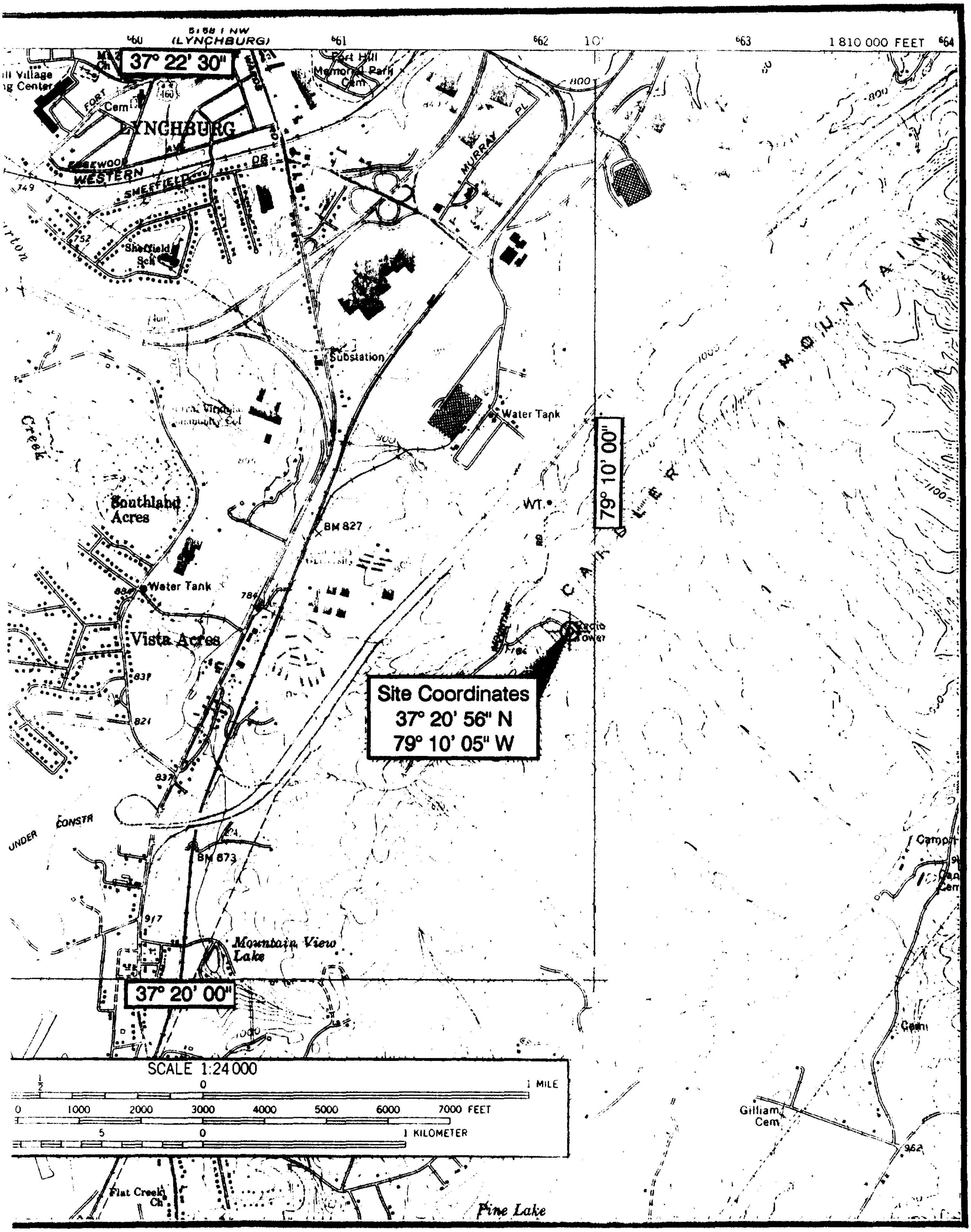

12'30"
659
660
5158 I NW
(LYNCHBURG)
661
37° 22' 30"
Forest Hill Village Shopping Center
Fort Hill Memorial Park Cem
LYNCHBURG
Clay
WESTERN
SHEFFIELD
DR
Barton
Creek
Sheffield Sch
Substation
Brookville
Cem
Beulah Ch
Bethlehem Ch
Happyland Lake
79° 12' 30"
Southland Acres
BM 827
Water Tank
Vista Acres
Site Coordinates
37° 20' 56" N
79° 10' 05" W
Lakeland Lake
Beulah Cem
UNDER CONSTR
BM 873
Mountain View Lake
Marsh Memorial Ch
37° 20' 00"
SCALE 1:24 000
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER
Flat Creek Ch
Pine La



(LYNCHBURG)
1 810 000 FEET
37° 22' 30"
Fort Hill
Memorial Park
Cem
LYNCHBURG
WESTERN
SHEFFIELD
MURRAY
PL
Sheffield
Sch
Substation
Water Tank
Southland
Acres
BM 827
WT
Water Tank
Vista Acres
Radio
Tower
MOUNTAIN
Site Coordinates
37° 20' 56" N
79° 10' 05" W
79° 10' 00"
UNDER
CONSTR
BM 873
Mountain View
Lake
37° 20' 00"
Camp
Cem
Gilliam
Cem
Flat Creek
Ch
Pine Lake
SCALE 1:24 000
1 MILE
0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

Table 1

Proposed Coverage and Interfering Contours

prepared for

Liberty University

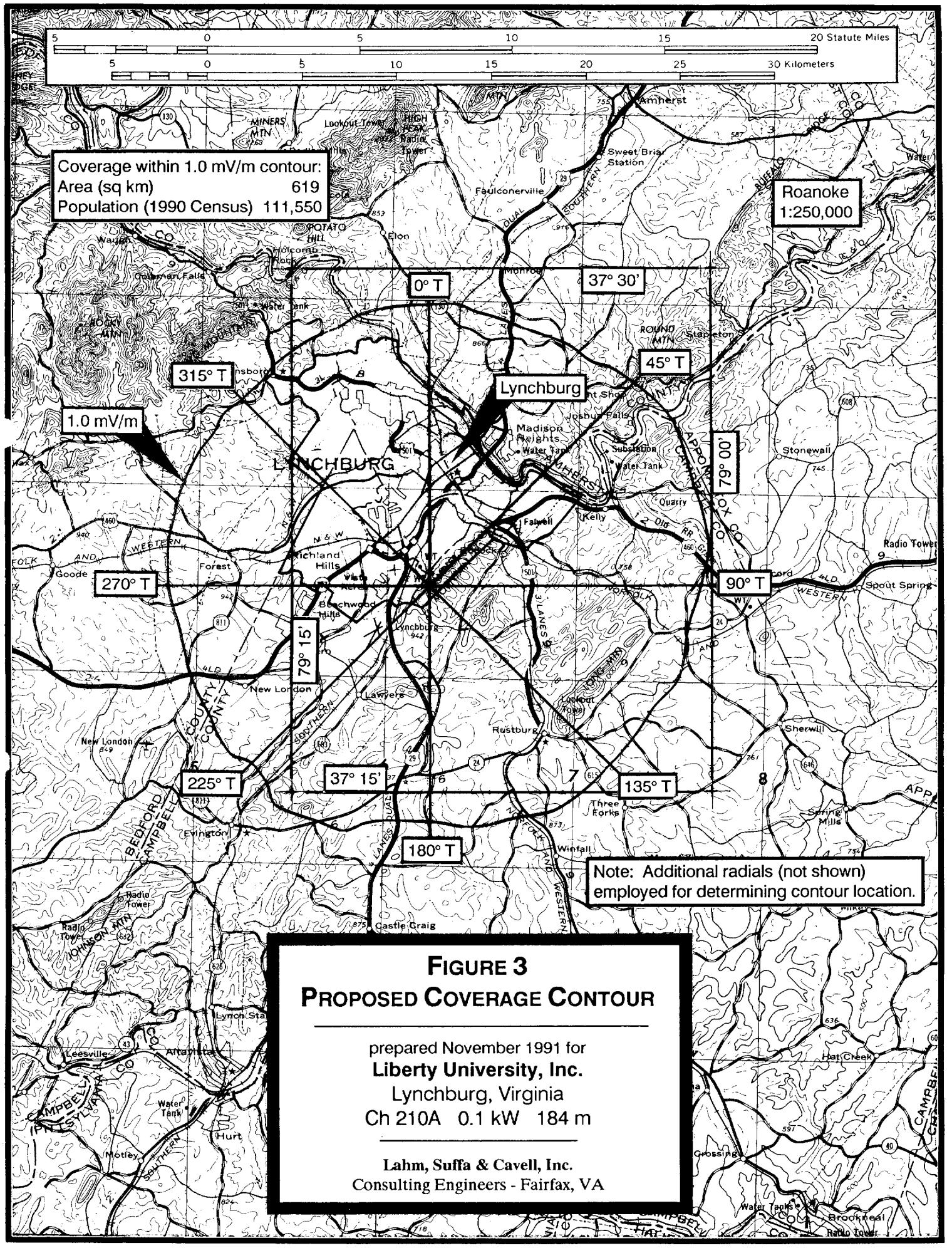
Lynchburg, Virginia

Ch 210A 0.10 KW 184 m

Azimuth (deg. T)	Effective Antenna Height (m)	Effective Radiated Power (dBk)	Contour Distances				
			Interfering				Protected
			100 dBu (km)	80 dBu (km)	54 dBu (km)	40 dBu (km)	60 dBu (km)
0	211	-10	1.5	4.4	22.6	49.1	14.9
5	213	-10	1.5	4.4	22.7	49.3	15.0
10	205	-10	1.5	4.3	22.3	48.3	14.7
15	202	-10	1.5	4.3	22.2	48.1	14.6
20	197	-10	1.5	4.3	21.8	47.5	14.5
25	201	-10	1.5	4.3	22.1	48.0	14.6
30	204	-10	1.5	4.3	22.3	48.3	14.7
35	201	-10	1.5	4.3	22.1	47.9	14.6
40	212	-10	1.5	4.4	22.7	49.2	15.0
45	219	-10	1.5	4.4	23.0	50.0	15.2
50	223	-10	1.5	4.5	23.2	50.4	15.4
55	228	-10	1.5	4.5	23.5	51.0	15.5
60	222	-10	1.5	4.5	23.2	50.3	15.3
70	211	-10	1.5	4.4	22.6	49.2	14.9
80	209	-10	1.5	4.4	22.5	48.9	14.9
90	193	-10	1.5	4.2	21.6	46.9	14.3
100	179	-10	1.5	4.1	20.8	45.4	13.8
110	183	-10	1.5	4.1	21.0	45.8	14.0
120	168	-10	1.5	4.0	20.1	44.1	13.4
130	169	-10	1.5	4.0	20.2	44.2	13.4
135	168	-10	1.5	4.0	20.1	44.1	13.4
140	172	-10	1.5	4.0	20.3	44.6	13.5
150	173	-10	1.5	4.0	20.4	44.7	13.6
160	161	-10	1.5	3.9	19.6	43.3	13.1
170	159	-10	1.5	3.9	19.5	43.2	13.0
180	149	-10	1.5	3.8	18.7	41.9	12.5

Table 1
(con't)

Azimuth (deg. T)	Effective Antenna Height (m)	Effective Radiated Power (dBk)	Contour Distances				
			Interfering				Protected
			100 dBu (km)	80 dBu (km)	54 dBu (km)	40 dBu (km)	60 dBu (km)
185	149	-10	1.5	3.8	18.7	41.9	12.5
190	150	-10	1.5	3.8	18.7	42.0	12.6
195	159	-10	1.5	3.9	19.4	43.2	13.0
200	178	-10	1.5	4.1	20.8	45.3	13.8
205	180	-10	1.5	4.1	20.9	45.5	13.8
210	183	-10	1.5	4.1	21.0	45.8	14.0
215	190	-10	1.5	4.2	21.4	46.6	14.2
220	170	-10	1.5	4.0	20.2	44.4	13.5
225	166	-10	1.5	4.0	20.0	43.9	13.3
230	179	-10	1.5	4.1	20.8	45.3	13.8
235	177	-10	1.5	4.1	20.7	45.1	13.7
240	171	-10	1.5	4.0	20.3	44.6	13.5
245	170	-10	1.5	4.0	20.2	44.3	13.5
250	172	-10	1.5	4.0	20.3	44.6	13.5
255	168	-10	1.5	4.0	20.1	44.2	13.4
260	169	-10	1.5	4.0	20.2	44.2	13.4
265	173	-10	1.5	4.0	20.4	44.7	13.6
270	179	-10	1.5	4.1	20.8	45.4	13.8
275	181	-10	1.5	4.1	20.9	45.6	13.9
280	184	-10	1.5	4.1	21.1	46.0	14.0
285	184	-10	1.5	4.1	21.1	46.0	14.0
290	188	-10	1.5	4.2	21.3	46.4	14.1
295	186	-10	1.5	4.2	21.2	46.2	14.1
300	188	-10	1.5	4.2	21.4	46.4	14.1
305	186	-10	1.5	4.2	21.2	46.1	14.0
310	189	-10	1.5	4.2	21.4	46.5	14.2
315	184	-10	1.5	4.1	21.1	46.0	14.0
320	184	-10	1.5	4.1	21.1	46.0	14.0
325	194	-10	1.5	4.2	21.7	47.1	14.3
330	196	-10	1.5	4.2	21.8	47.4	14.4
335	199	-10	1.5	4.3	21.9	47.6	14.5
340	200	-10	1.5	4.4	22.6	49.0	14.5
355	210	-10	1.5	4.4	22.6	49.0	14.9


Coverage within 1.0 mV/m contour:
Area (sq km) 619
Population (1990 Census) 111,550
Roanoke
1:250,000
0° T
37° 30'
45° T
315° T
Lynchburg
1.0 mV/m
79° 00'
270° T
90° T
79° 15'
225° T
37° 15'
135° T
180° T
Note: Additional radials (not shown) employed for determining contour location.
FIGURE 3
PROPOSED COVERAGE CONTOUR
prepared November 1991 for
Liberty University, Inc.
Lynchburg, Virginia
Ch 210A 0.1 kW 184 m
Lahm, Suffa & Cavell, Inc.
Consulting Engineers - Fairfax, VA

ALLOCATION STUDY CONTOUR LOCATION DATA

prepared for
Liberty University
Lynchburg, Virginia
Table 2-A
New CP (BPED 880801ME) Roanoke, VA Ch 212C2
2.40 kW, 410 m N 37° 22' 27" W 79° 46' 08"

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	80 dBu F(50,10) (km)
0	397.3	-0.6	34.7	11.1
10	390.1	-0.6	34.5	11.0
20	380.7	-0.6	34.1	10.9
30	328.4	-0.6	31.6	10.2
40	398.6	-0.2	35.6	11.4
45	441.1	0.3	38.3	12.3
50	431.2	0.8	38.8	12.5
60	362.4	2.2	38.4	12.6
70	364.6	3.2	40.4	13.4
80	426.0	3.7	44.2	14.8
90	457.1	3.8	46.0	15.3
100	495.3	3.8	48.0	16.5
110	500.1	3.8	48.2	16.6
120	429.7	3.6	44.1	14.7
130	447.3	2.9	43.7	14.5
135	441.7	2.4	42.3	13.9
140	456.4	1.8	42.0	13.6
150	445.2	0.1	38.1	12.2
160	448.9	-1.5	35.2	11.1
170	477.2	-2.7	34.1	10.4
180	472.7	-3.2	33.0	10.0
190	445.4	-2.7	33.0	10.2
200	391.2	-1.4	33.2	10.5
210	340.9	0.4	34.1	11.0
220	341.4	1.8	36.7	12.0
225	346.6	2.2	37.7	12.4
230	436.6	2.6	42.5	14.0
240	478.3	2.9	45.2	14.8
250	426.2	2.9	42.6	14.1
260	431.2	2.9	42.8	14.2
270	388.4	2.9	40.9	13.5
280	378.2	2.9	40.4	13.4
290	328.8	2.9	38.0	12.5
300	324.2	2.8	37.6	12.4
310	329.2	2.0	36.3	11.9
315	342.3	1.1	35.6	11.5
320	348.8	0.2	34.3	11.1
330	366.2	-0.6	33.5	10.7
340	379.0	-0.6	34.0	10.9
350	405.4	-0.6	35.0	11.2

Table 2-B
WPVA (APP) Waynesboro, VA Ch 211A
2.5 kW, 300 m N 38° 01' 41" W 78° 52' 22"

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	54 dBu F(50,10) (km)
0	322.5	4.0	39.6	59.2
10	315.1	4.0	39.2	58.6
20	274.4	4.0	36.9	55.1
30	155.9	4.0	28.2	42.7
40	195.8	4.0	31.4	47.3
45	124.2	4.0	25.6	38.8
50	8.2	4.0	12.7	18.6
60	133.9	4.0	26.4	40.0
70	371.1	4.0	42.1	63.6
80	471.1	4.0	47.1	71.4
90	479.2	4.0	47.5	72.1
95	483.4	4.0	47.7	72.4
100	485.3	4.0	47.8	72.6
105	492.5	4.0	48.2	73.1
110	485.7	4.0	47.8	72.6
115	471.6	4.0	47.1	71.5
120	437.7	4.0	45.3	68.8
125	400.3	4.0	43.6	65.8
130	394.0	4.0	43.2	65.3
135	406.9	4.0	43.9	66.3
140	395.7	4.0	43.3	65.4
145	420.9	4.0	44.5	67.4
150	437.8	4.0	45.3	68.8
155	453.4	4.0	46.1	70.0
160	423.9	4.0	44.7	67.7
165	447.9	4.0	45.8	69.6
170	426.3	4.0	44.8	67.9
175	398.2	4.0	43.4	65.6
180	353.3	4.0	41.2	62.1
185	254.9	4.0	35.7	53.4
190	154.9	4.0	28.2	42.6
195	66.9	4.0	19.1	27.9
200	-13.7	4.0	12.7	18.6
205	-54.2	4.0	12.7	18.6
210	-55.3	4.0	12.7	18.6
215	27.9	4.0	12.7	18.6
220	143.0	4.0	27.2	41.2
225	151.3	4.0	27.9	42.2
230	180.9	4.0	30.2	45.5
235	175.4	4.0	29.8	44.9
240	200.7	4.0	31.8	47.8
245	218.6	4.0	33.3	49.9
250	247.2	4.0	35.2	52.7
255	268.0	4.0	36.5	54.6
260	277.1	4.0	37.1	55.3
265	280.4	4.0	37.3	55.6
270	281.0	4.0	37.3	55.6

Table 2-B Con't

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	54 dBu F(50,10) (km)
275	280.7	4.0	37.3	55.6
280	284.0	4.0	37.5	55.9
290	288.4	4.0	37.7	56.3
300	293.2	4.0	38.0	56.7
310	297.3	4.0	38.2	57.0
315	303.6	4.0	38.5	57.6
320	307.1	4.0	38.8	57.9
330	313.4	4.0	39.1	58.4
340	315.2	4.0	39.2	58.6
350	320.4	4.0	39.5	59.0

Table 2-C
WPVA(LIC) Waynesboro, VA Ch 211A
2.5 kW, 313 m N 38° 01' 17" W 78° 53' 07"

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	54 dBu F(50,10) (km)
0	345.6	4.0	40.8	61.4
10	350.6	4.0	41.1	61.8
20	326.0	4.0	39.8	59.5
30	230.1	4.0	34.1	51.1
40	240.5	4.0	34.8	52.1
45	186.5	4.0	30.7	46.1
50	51.1	4.0	16.6	24.5
60	162.7	4.0	28.8	43.5
70	415.3	4.0	44.2	67.0
80	498.9	4.0	48.6	73.6
90	502.3	4.0	48.8	74.0
95	514.1	4.0	49.4	74.7
100	522.6	4.0	50.0	75.4
105	517.5	4.0	49.6	74.9
110	504.9	4.0	48.9	74.1
115	471.4	4.0	47.1	71.5
120	434.2	4.0	45.2	68.5
125	427.6	4.0	44.8	67.9
130	435.8	4.0	45.2	68.6
135	418.3	4.0	44.4	67.2
140	450.6	4.0	46.0	69.8
145	469.4	4.0	47.0	71.3
150	463.7	4.0	46.7	70.8
155	427.8	4.0	44.8	67.9
160	459.5	4.0	46.4	70.5
165	441.5	4.0	45.5	69.1
170	405.8	4.0	43.8	66.2
175	351.6	4.0	41.2	61.9
180	248.0	4.0	35.3	52.8
185	152.7	4.0	28.0	42.3
190	115.2	4.0	24.8	37.6
195	76.0	4.0	20.3	29.8
200	10.9	4.0	12.7	18.6
205	-17.1	4.0	12.7	18.6
210	22.1	4.0	12.7	18.6
215	91.6	4.0	22.3	33.2
220	188.5	4.0	30.8	46.4
225	167.1	4.0	29.2	44.0
230	186.4	4.0	30.7	46.1
235	161.7	4.0	28.7	43.3
240	189.1	4.0	30.9	46.5
245	209.5	4.0	32.5	48.9
250	245.5	4.0	35.1	52.6
255	282.6	4.0	37.4	55.8
260	303.1	4.0	38.5	57.6

Table 2-C Con't

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	54 dBu F(50,10) (km)
265	316.5	4.0	39.2	58.7
270	317.1	4.0	39.3	58.8
275	310.1	4.0	38.9	58.1
280	307.7	4.0	38.8	57.9
290	316.8	4.0	39.3	58.8
300	321.0	4.0	39.5	59.1
310	325.6	4.0	39.8	59.5
315	320.3	4.0	39.5	59.0
320	327.4	4.0	39.8	59.7
330	336.7	4.0	40.4	60.5
340	337.6	4.0	40.4	60.6
350	346.1	4.0	40.9	61.4

NGDC 30-second terrain data used for all EAH calculations.

Table 2-D
WFFC Ferrum, VA Ch 210A
0.1 kW, -12 m N 36° 55' 46" W 80° 01' 27"

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	Contour Distances 40 dBu F(50,10) (km)
0	39.9	-10.0	6.4	21.6
5	22.9	-10.0	5.6	18.6
10	5.4	-10.0	5.6	18.6
15	16.1	-10.0	5.6	18.6
20	30.7	-10.0	5.7	18.8
25	52.6	-10.0	7.4	25.0
30	60.3	-10.0	8.0	26.6
35	55.1	-10.0	7.6	25.5
40	53.1	-10.0	7.5	25.1
45	30.3	-10.0	5.7	18.7
50	34.1	-10.0	6.0	19.8
55	65.2	-10.0	8.3	27.6
60	71.1	-10.0	8.7	28.8
65	78.8	-10.0	9.2	30.5
70	76.2	-10.0	9.0	29.9
75	71.1	-10.0	8.7	28.8
80	77.1	-10.0	9.1	30.1
85	80.3	-10.0	9.3	30.7
90	79.0	-10.0	9.2	30.6
95	74.4	-10.0	8.9	29.5
110	74.2	-10.0	8.9	29.5
110	40.8	-10.0	6.5	21.8
120	45.1	-10.0	6.9	23.0
130	44.8	-10.0	6.8	23.0
135	40.1	-10.0	6.5	21.6
140	51.0	-10.0	7.3	24.6
150	74.2	-10.0	8.9	29.5
160	91.1	-10.0	9.9	33.1
170	93.2	-10.0	10.0	33.6
180	49.2	-10.0	7.2	24.1
190	59.0	-10.0	7.9	26.4
200	85.1	-10.0	9.6	31.8
210	76.9	-10.0	9.1	30.1
220	74.5	-10.0	8.9	29.5
225	61.8	-10.0	8.1	27.0
230	64.0	-10.0	8.3	27.4
240	31.1	-10.0	5.7	18.9
250	16.3	-10.0	5.6	18.6
260	-46.3	-10.0	5.6	18.6
270	-109.1	-10.0	5.6	18.6
280	-176.0	-10.0	5.6	18.6
290	-177.4	-10.0	5.6	18.6
300	-178.5	-10.0	5.6	18.6
310	-162.5	-10.0	5.6	18.6
315	-148.3	-10.0	5.6	18.6
320	-134.2	-10.0	5.6	18.6
325	-119.3	-10.0	5.6	18.6

Table 2-D Con't

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	40 dBu F(50,10) (km)
330	-70.0	-10.0	5.6	18.6
335	-3.5	-10.0	5.6	18.6
340	14.7	-10.0	5.6	18.6
345	27.4	-10.0	5.6	18.6
350	34.8	-10.0	6.0	20.1
355	44.2	-10.0	6.8	22.8

NGDC 30-second terrain data used for all EAH calculations.

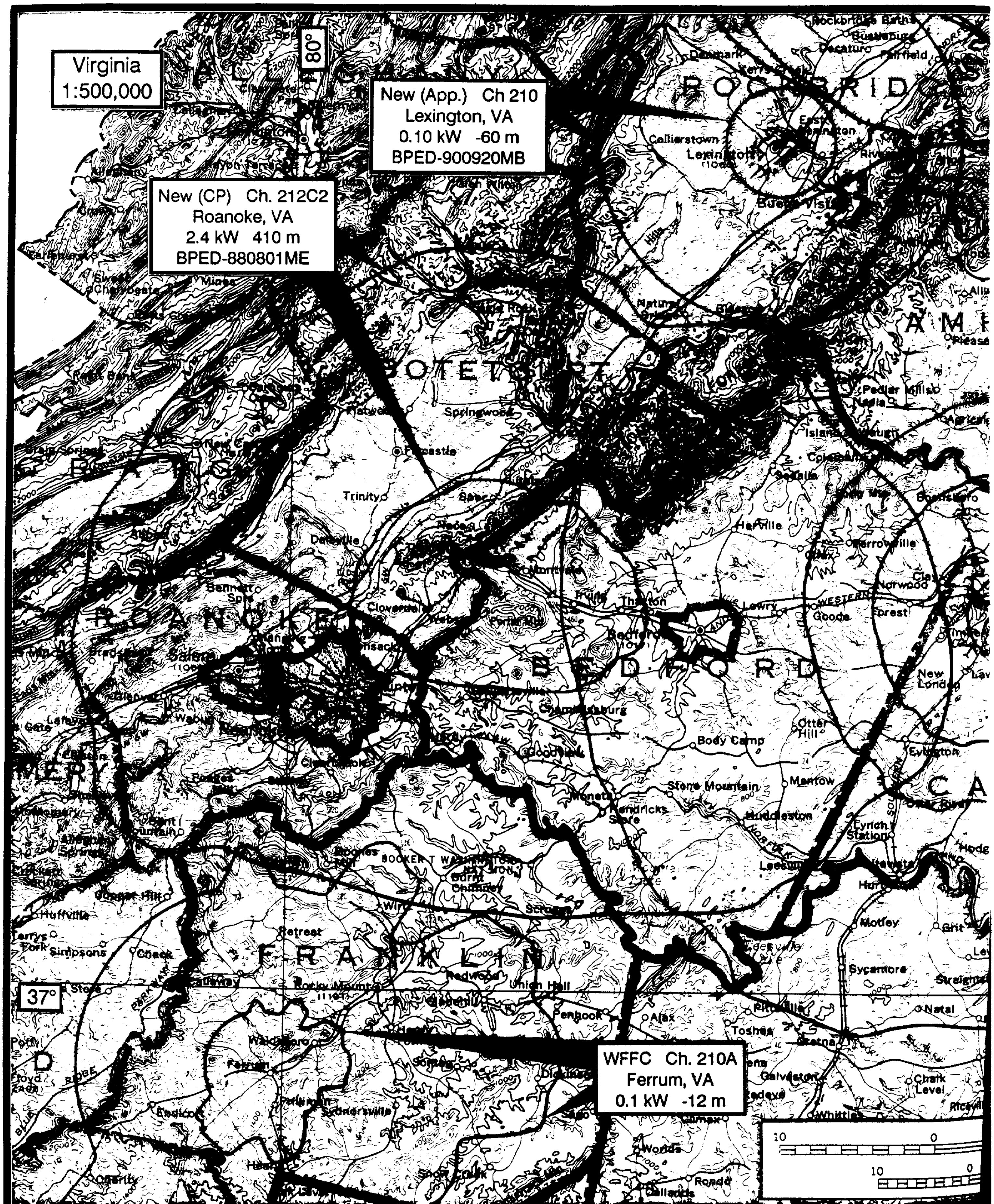
Table 2-E
New FM Station (BPED 900920MB) Lexington, VA Ch 210A
0.10 kW, -60 m N 37° 47' 22" W 79° 26' 11"

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	40 dBu F(50,10) (km)
0	-57.2	-10.0	5.6	18.6
10	-26.6	-10.0	5.6	18.6
20	-22.2	-10.0	5.6	18.6
30	-71.1	-10.0	5.6	18.6
40	-87.6	-10.0	5.6	18.6
45	-86.7	-10.0	5.6	18.6
50	-100.4	-10.0	5.6	18.6
55	-105.5	-10.0	5.6	18.6
60	-96.0	-10.0	5.6	18.6
65	-70.5	-10.0	5.6	18.6
70	-60.2	-10.0	5.6	18.6
75	-74.7	-10.0	5.6	18.6
80	-64.6	-10.0	5.6	18.6
85	-73.3	-10.0	5.6	18.6
90	-104.5	-10.0	5.6	18.6
95	-121.3	-10.0	5.6	18.6
100	-140.5	-10.0	5.6	18.6
105	-122.8	-10.0	5.6	18.6
110	-99.8	-10.0	5.6	18.6
115	-79.8	-10.0	5.6	18.6
120	-61.8	-10.0	5.6	18.6
125	-43.8	-10.0	5.6	18.6
130	-74.0	-10.0	5.6	18.6
135	-76.4	-10.0	5.6	18.6
140	-61.4	-10.0	5.6	18.6
145	-57.7	-10.0	5.6	18.6
150	-65.6	-10.0	5.6	18.6
155	-62.1	-10.0	5.6	18.6
160	-36.3	-10.0	5.6	18.6
165	-17.8	-10.0	5.6	18.6
170	3.9	-10.0	5.6	18.6
175	21.5	-10.0	5.6	18.6
180	31.0	-10.0	5.7	18.9
185	19.8	-10.0	5.6	18.6
190	4.9	-10.0	5.6	18.6
195	-2.4	-10.0	5.6	18.6
200	-8.6	-10.0	5.6	18.6
205	-14.8	-10.0	5.6	18.6
210	-15.8	-10.0	5.6	18.6
215	-9.7	-10.0	5.6	18.6
220	-9.0	-10.0	5.6	18.6
225	-20.7	-10.0	5.6	18.6
230	-79.9	-10.0	5.6	18.6
240	-60.3	-10.0	5.6	18.6

Table 2-E Con't

Azimuth (deg)	Effective Antenna Height (meters)	Effective Radiated Power (dBK)	Contour Distances 60 dBu F(50,50) (km)	40 dBu F(50,10) (km)
250	-58.4	-10.0	5.6	18.6
260	-80.1	-10.0	5.6	18.6
270	-83.1	-10.0	5.6	18.6
280	-111.8	-10.0	5.6	18.6
290	-172.5	-10.0	5.6	18.6
300	-154.7	-10.0	5.6	18.6
310	-83.4	-10.0	5.6	18.6
315	-100.3	-10.0	5.6	18.6
320	-158.1	-10.0	5.6	18.6
330	-139.9	-10.0	5.6	18.6
340	-186.9	-10.0	5.6	18.6
350	-131.3	-10.0	5.6	18.6

NGDC 30-second terrain data used for all EAH calculations.


Virginia
1:500,000
80°
New (App.) Ch 210
Lexington, VA
0.10 kW -60 m
BPED-900920MB
New (CP) Ch. 212C2
Roanoke, VA
2.4 kW 410 m
BPED-880801ME
37°
WFFC Ch. 210A
Ferrum, VA
0.1 kW -12 m
BEDFORD
FRANKLIN
Lexington
Buena Vista
Bedford
Salem
Body Camp
Stone Mountain
Retreat
Simpsons
Union Hall
Penhook
Waidsboro
Ferrum
10
0
10
0

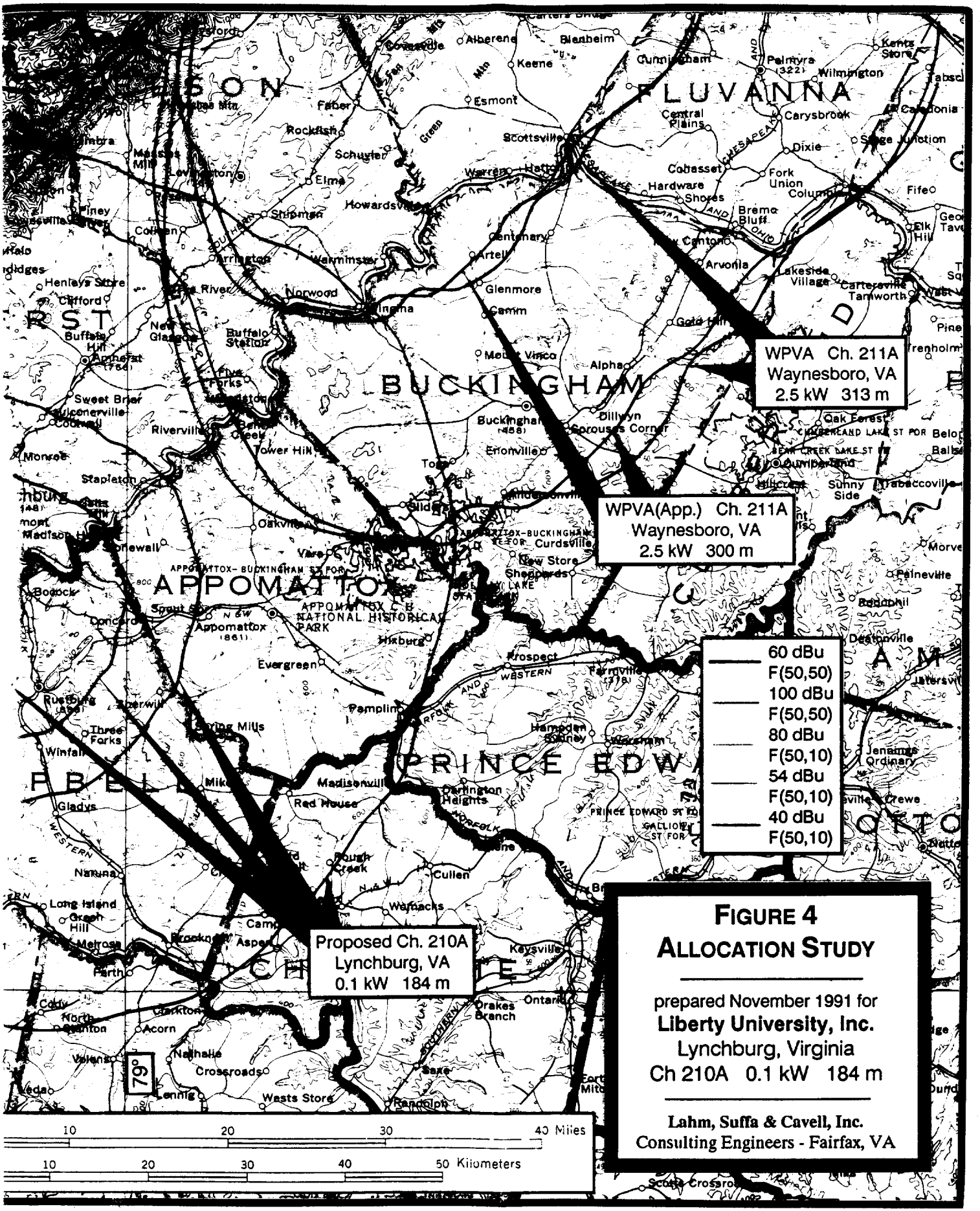
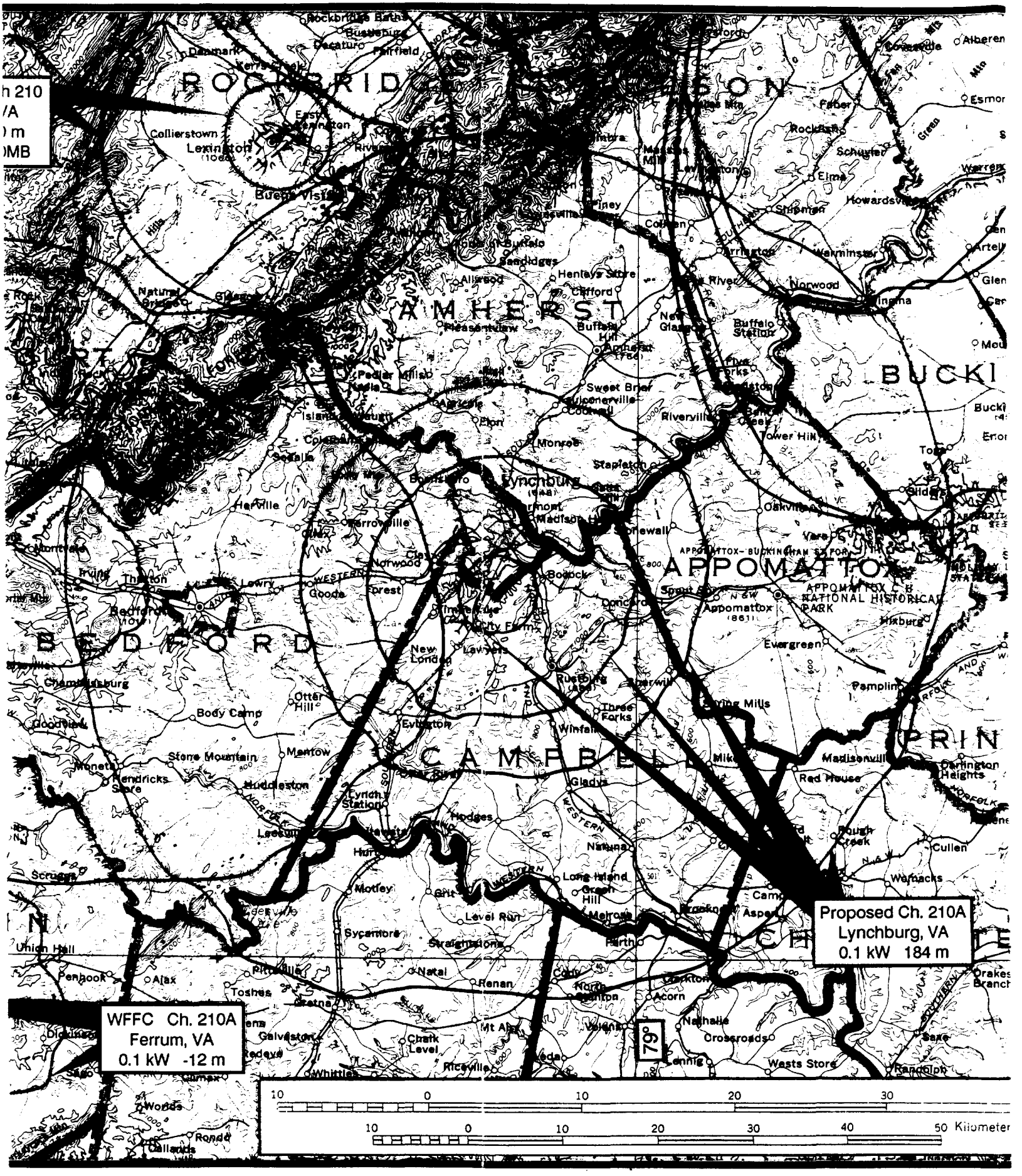


FIGURE 4
ALLOCATION STUDY

prepared November 1991 for
Liberty University, Inc.
Lynchburg, Virginia
Ch 210A 0.1 kW 184 m

Lahm, Suffa & Cavell, Inc.
Consulting Engineers - Fairfax, VA


h 210
/A
) m
)MB
Proposed Ch. 210A
Lynchburg, VA
0.1 kW 184 m
WFFC Ch. 210A
Ferrum, VA
0.1 kW -12 m
79°
10 0 10 20 30
10 0 10 20 30 40 50 Kilometer

Statement B

ALLOCATION CONSIDERATIONS

prepared for
Liberty University
Lynchburg, Virginia

Ch 210A (89.9 MHz) 0.10 KW (H&V) 184 m

The map of Figure 4 is an allocation study conducted in accordance with Section 73.509 of the FCC Rules. All contours for the new station on channel 210 at Lexington were computed using NGDC 30 second terrain data along the 8 cardinal radials; for all other stations 10-degree spaced radials were employed. All stations with directional antennas listed in the FCC engineering database were computed at 10° azimuths, using the directional antenna parameters shown therein. The station facilities were as shown in the FCC's engineering database of September 29, 1991 except the proposed station. All 60 dBμ contours were computed using the F(50,50) propagation curves; all other contours were computed using the F(50,10) curves, except where the distance was less than 16 kilometers, in which case the F(50,50) curves were employed. No prohibited overlap will occur between the proposed Lynchburg facility and any other station. Tables 2A-E contain data with respect to facilities considered and their contour locations.

With respect to commercial stations operating on channels 263 and 264, the proposed facility will satisfy distance separation requirements of Section 73.207 of the Rules.

Statement C

CHANNEL 6 CONSIDERATIONS

prepared for
Liberty University
Lynchburg, Virginia

Ch 210A (89.9 MHz) 0.10 KW (H&V) 184 m

This proposal has been analyzed in accordance with the provisions of Section 73.525 of the FCC Rules for potential interference to channel 6 television reception. There are two channel 6 facilities of concern, WVVA, Bluefield, Virginia, and WTVR, Richmond, Virginia. The proposed Lynchburg site is outside the grade B contours of both stations, and the Channel 210 interfering contour will not overlap the 47 dBμ grade B contour of any of the two stations.

The distances to each channel 6 television station 47 dBμ contour were determined at 1° azimuth increments over the pertinent spans in the direction of the proposed Lynchburg facility. The undesired-to-desired signal ratio for the grade B contour was determined from Section 73.599, Figure 1, of the Rules (20.4 dB for channel 210) and added to the 47 dBμ contour level to obtain the potentially interfering Lynchburg signal level (67 dBu). Although not included in these calculations, it would also be appropriate to add the 6 dB receive antenna directivity factor to each of these potentially interfering signal levels as the Grade B contour for each station lies within the range of angles from the proposed station to which the directivity factor applies. The factor was not added due to the great distance between the proposed interfering contour and each Channel 6 Grade B contours.

The distances to each of these potentially interfering contours was determined from the proposed Lynchburg facility at 5° and 1° azimuth increments within the appropriate sector. The protected television and potentially interfering FM contours were plotted on a 1:2,000,000 U.S.G.S. map of the area. As demonstrated in Figure 5, the proposed FM interfering contour would not overlap any of the pertinent protected television contours. Thus, under the FCC Rules, objectionable interference is unlikely to occur, and this proposal will comply with the Channel 6 television protection criteria.

Statement C (con't)

The distances to the protected television contours were determined using the authorized power and antenna height as shown in FCC records. The directional antenna radiation data, maximum power and antenna height shown herein were employed for the proposed Lynchburg facility. For all stations, NGDC 30-second terrain data were employed to obtain the antenna height above average terrain along each radial, and a computer program that simulates the FCC's F(50,50) and F(50,10) curves was used to determine the distance to the pertinent contours. The F(50,10) curves were used for the FM interfering contour, while the F(50,50) curves were used for the protected television contours.

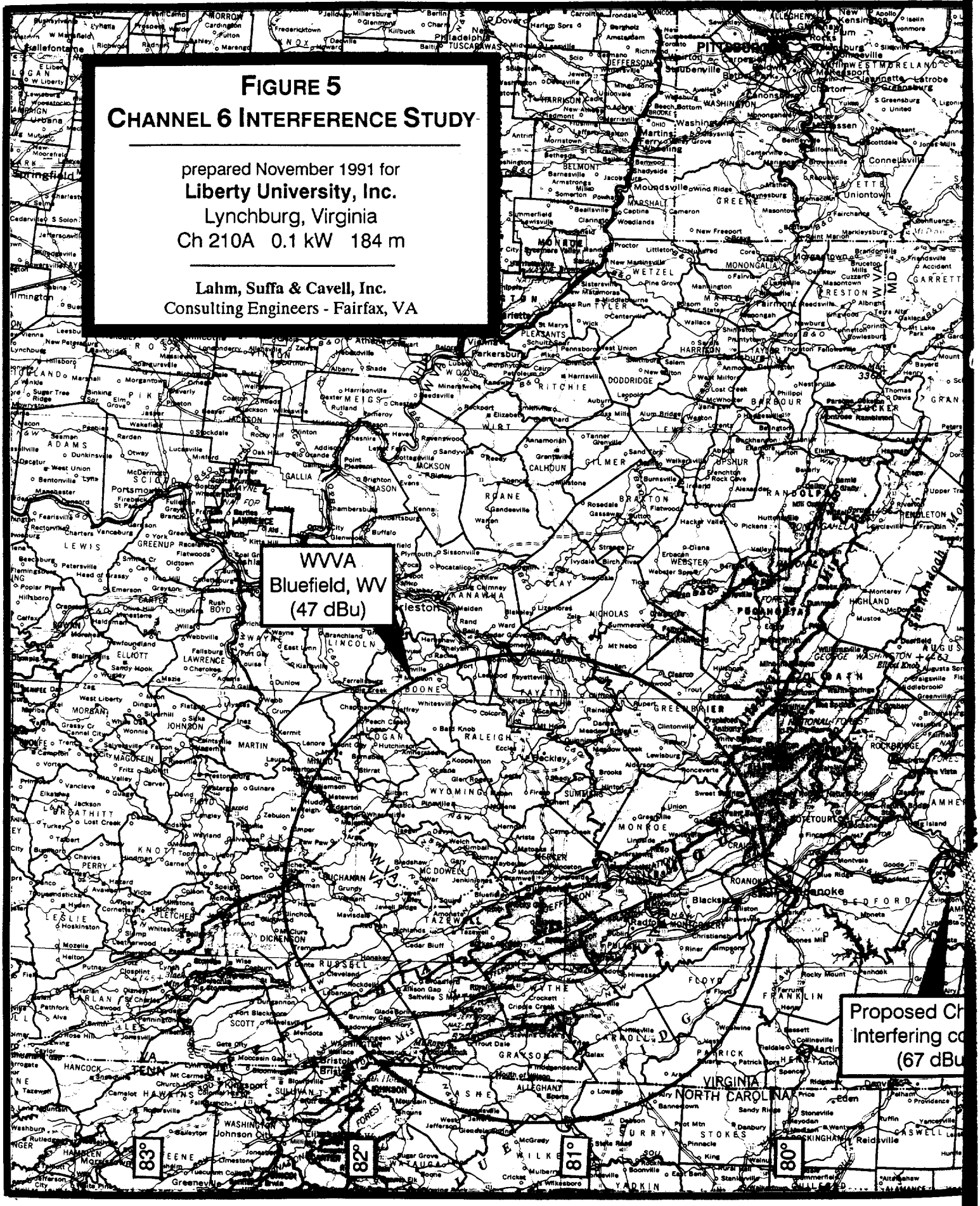
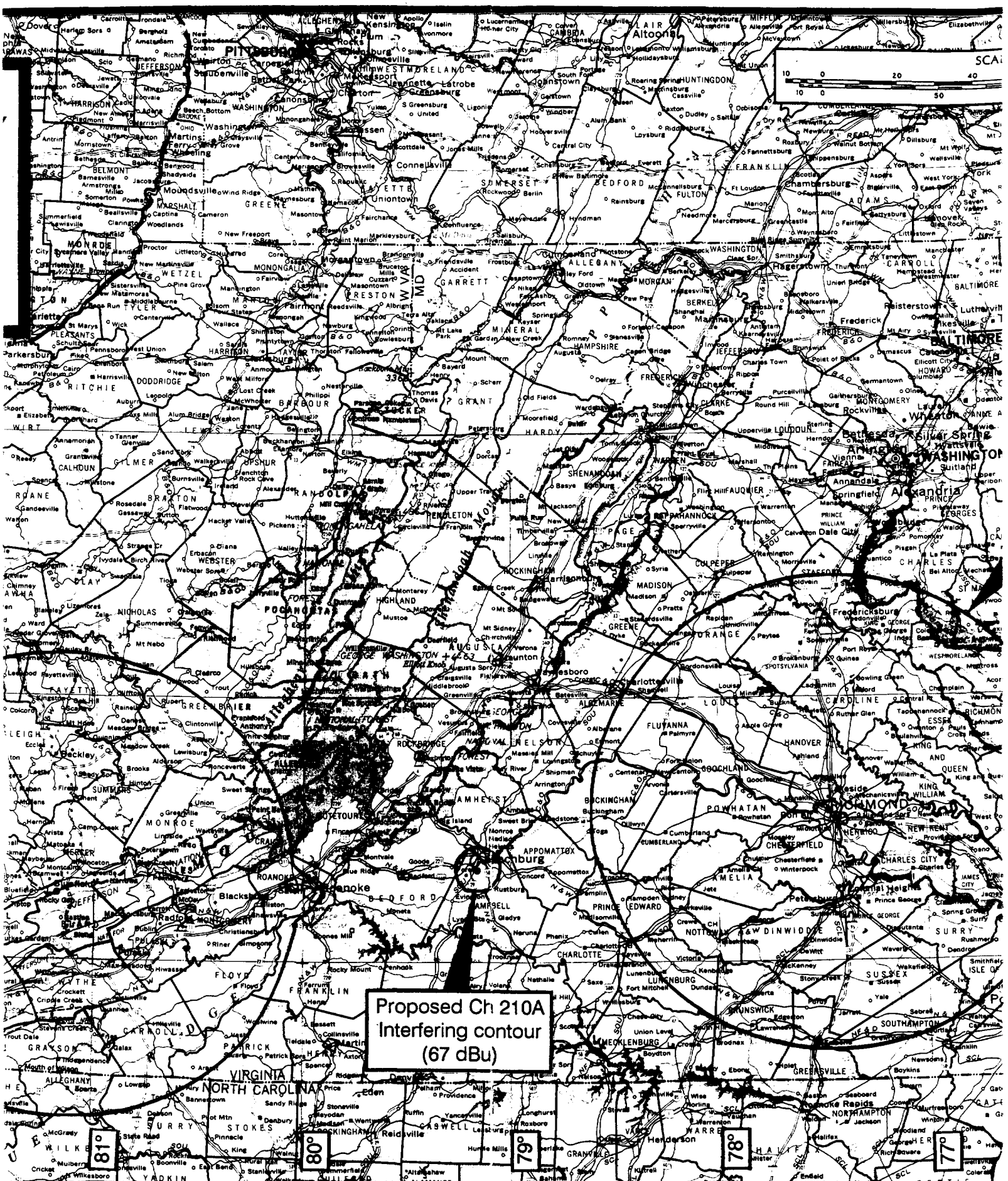
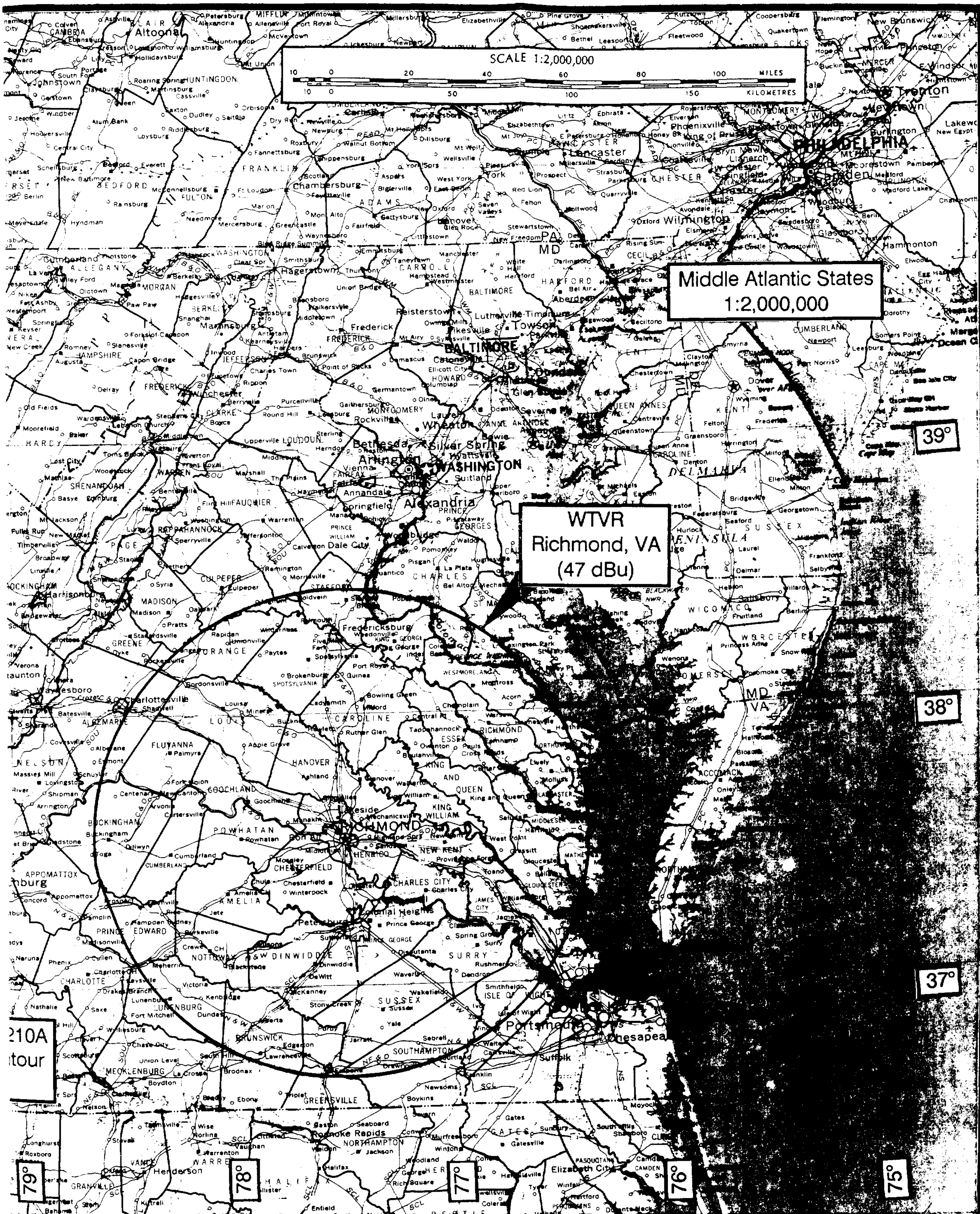


FIGURE 5
CHANNEL 6 INTERFERENCE STUDY
prepared November 1991 for
Liberty University, Inc.
Lynchburg, Virginia
Ch 210A 0.1 kW 184 m
Lahm, Suffa & Cavell, Inc.
Consulting Engineers - Fairfax, VA
WVVA
Bluefield, WV
(47 dBu)
Proposed Ch
Interfering co
(67 dBu
83°
82°
81°
80°


Proposed Ch 210A
Interfering contour
(67 dBu)
81°
80°
79°
78°
77°



SCALE 1:2,000,000
MILES
KILOMETRES
Middle Atlantic States
1:2,000,000
WTVR
Richmond, VA
(47 dBu)
39°
38°
37°
79°
78°
77°
76°
75°
PHILADELPHIA
BALTIMORE
WASHINGTON
RICHMOND
Fredericksburg
Alexandria
Arlington
Petersburg
Portsmouth
Wilmington
Trenton
Lancaster
Hagerstown
Frederick
Charlottesville

Statement D

ENVIRONMENTAL CONSIDERATIONS

prepared for
Liberty University
Lynchburg, Virginia

Ch 210A (89.9 MHz) 0.10 KW (H&V) 184 m

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required.

Nature of The Proposal

This application proposes to locate a new educational FM station at the existing site of television station W19BC, Lynchburg, Virginia. The antenna will be mounted on an existing tower, which according to Note 1, Section 1.1306(b)(3) of the Rules may be categorically excluded from environmental processing.

Human Exposure to Radiofrequency Radiation

The proposed transmitting system will comply with the guidelines for human exposure to RF radiation contained in ANSI guideline C95.1-1982. The FCC has adopted the ANSI guideline as the maximum allowable exposure for humans in the vicinity of transmitting antennas.

The proposed FM antenna will be mounted 10 meters above ground level on an existing tower owned by Liberty University. The only existing broadcast facility located on the tower is W19BC. There are also low power/intermittent duty auxiliary facilities at the site which, due to their duty cycle and low power, are not considered significant contributors to RF energy exposure at ground level.

On a worst case basis, the proposed FM station would cause RF levels at 2.0 meters above the base of the tower to be 10.4 percent of the applicable ANSI guideline for continuous human exposure.

Statement D (con't)

Consideration has also been given to the RF energy levels contributed by W19BC. W19BC operates with effective radiated power of 13.0 kilowatts (visual) and 1.3 kilowatts (aural) on channel 19+ (500-506 MHz). The center of radiation for the W19BC antenna is 14.5 meters above ground. At this power and height, the RF energy contribution *computed on a worst case basis* at ground level from W19BC is 1033 $\mu W/cm^2$, or 62.0% of the ANSI guideline of 1667 $\mu W/cm^2$ at 500 MHz.

Also located at the site are land mobile facilities owned by GE/Ericksson Communications and FM station WKZZ, Lynchburg, VA. The G.E. facility is located several hundred meters from the proposed FM site, and all transmitters consist of low power and intermittant duty transmitters. The WKZZ transmitter is located at least 20 meters laterally and 20 meters vertically from the base of the W19BC tower proposed for use herein. When computed on a worst-case basis, the WKZZ facility would place 60.9 $\mu W/cm^2$ of RF energy at the W19BC tower base, or 6.1% of the applicible ANSI guideline. It is also noted that WKZZ has a pending application to relocate at a site 14 kilometers from this location. The issue of WKZZ contribution to RF exposure at this site will become moot upon construction of that facility.

In a worst-case analysis, without considering antenna elevation patterns, the combination of facilities at this site will be 78.5% of the ANSI guideline. Therefore, the proposed operation will comply with the ANSI guideline. This site complies with Section 1.1306(b) the FCC Rules concerning human exposure to RF energy. Liberty University will ensure that appropriate warning signs are posted on the tower. A fence presently surrounds the tower base and the access road is secured.

With respect to worker safety, the RF energy levels on the tower are expected to be below the ANSI guideline, except when the proposed FM station is operating. Liberty will create a policy to ensure the safety of workers on the tower, and will cooperate with the other users of the site in the policy implementation. Liberty will take any steps required to